

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously amended) A transposable element comprising at least four inverted repeats, forming at least two pairs of opposing pairs of inverted repeats, the element comprising DNA for insertion into a host genome, the DNA being located between two pairs of opposing repeats such that excision by a transposase or transposases of said pairs, *in situ*, is effective to be able to leave said DNA integrated into the host genome, without the presence of said repeats flanking said DNA insertion.
2. (Previously amended) The transposable element of claim 1, wherein the DNA for insertion into a host genome is a gene for expression in the host.
3. (Previously amended) The transposable element of claim 1, wherein the DNA for insertion into a host genome is a promoter or enhancer sequence.
4. (Previously amended) The transposable element of claim 1, wherein the DNA for insertion into a host genome is a stop codon or is sufficient to bring about an in frame stop codon.
5. Cancelled
6. (Previously amended) The transposable element of claim 1, having four inverted repeats.
7. (Previously amended) The transposable element of claim 1, wherein the inverted repeats are homologous to each other.
8. (Previously amended) The transposable element of claim 1, wherein said pairs of homologous inverted repeats are heterologous to other pairs of inverted repeats.

9. (Previously amended) The transposable element of claim 1, wherein one or more of the inverted repeats is a minimal non-terminal repeat.

10. (Previously amended) The transposable element of claim 1, comprising at least one genetic marker.

11. (Previously amended) The transposable element of claim 1, wherein the element comprises two external, opposed inverted repeats, one on each side of an inversion cassette, the cassette comprising:

the DNA for insertion into a host genome, two inverted cassette repeats and two inversion sites, the DNA for insertion into a host genome being flanked on either side by one of the inverted cassette repeats, each inverted cassette repeat being further flanked by an inversion site;

the cassette being capable of inversion within the transposed element *in situ* in the presence of a recombinase, such that following inversion, the two inverted cassette repeats flanking the DNA for insertion into a host genome each separately form a further pair of opposing inverted repeats with one of the external inverted repeats, the further pairs of opposing repeats being excisable by a transposase *in situ* to leave said DNA without flanking transposon-derived repeats in the host genome.

12. (Previously amended) The transposable element of claim 11, wherein the inversion sites are recognised by inversion-inducing recombinase.

13. (Previously amended) The transposable element of claim 12, wherein the inversion sites are recognised by the Flp/FRT or Cre/lox inversion systems.

14-18. (Cancelled)

19. (Previously amended) The transposable element of claim 10, comprising at least one genetic marker associated with an identifiable step in the transposition/excision process.

20. (Previously amended) The transposable element of claim 19, wherein the marker is associated with the DNA for insertion into a host genome.

21. (Previously amended) The transposable element of 19, comprising as a terminal repeat, a repeat having a deletion of no more than 50%, or mutation or inversion that disables no more than 50% of the repeat.
22. (Previously amended) The transposable element of claim 1, wherein the element is a class II transposable element.
23. (Previously amended) The transposable element of claim 1, wherein the transposase is encoded within the transposon.
24. (Previously amended) A method for transforming an organism, comprising exposing replicative tissue of the organism to an element of claim 1 under conditions effective to incorporate the element into the genome thereof and, subsequently or simultaneously therewith, providing conditions suitable to excise said repeats from the genome, and selecting an organism, or tissue therefor, comprising the DNA intended for insertion lacking repeats in at least one orientation.
25. (Previously amended) The method of claim 24, wherein the transformant organism is exposed to a source of active transposase.
26. (Previously amended) The method of claim 25, wherein the source of active transposase comprises a helper plasmid or RNA encoding the transposase, or a transposase protein or integrated transposase source.
27. (Currently amended) A non-human transformant organism obtained in accordance with claim [[24]] 37.
28. (Previously amended) The transformant organism of claim 27, wherein the organism is an insect.
29. (Previously amended) The transposable element of claim 10, wherein the marker is a conditional lethal.

30. (Previously amended) The transposable element of claim 12, wherein the inversion sites are recognised by a directional recombinase, the recombinase-mediated inversion being essentially irreversible.

31. (Previously amended) The transposable element of claim 30, wherein the inversion site is lox66 or lox71.

32. (Previously presented) The transposable element of claim 1, which is effective to be able to leave said DNA integrated into the host genome without the presence of any transposon DNA.

33. (New) The transposable element of claim 1, wherein the inverted repeats are repeats from Class II transposable elements.

34. (New) The transposable element of claim 32, wherein the inverted repeats are piggyBac repeats.

35. (New) The transposable elements of claim 32, wherein the inverted repeats are Hermes, hobo, Minos, or mariner repeats.

36. (New) The method of claim 24, wherein the organism is an insect.

37. (New) The method of claim 24, wherein the inverted repeats of the transposable element are repeats from Class II transposable elements.

38. (New) The method of claim 37, wherein the inverted repeats are piggyBac repeats.

39. (New) The method of claim 38, wherein the inverted repeats are Hermes, hobo, Minos, or mariner repeats.